



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-1159; Project Identifier AD-2022-00692-E; Amendment 39-22530; AD 2023-17-04]

RIN 2120-AA64

Airworthiness Directives; Continental Aerospace Technologies, Inc. Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2022-04-04 for certain Continental Aerospace Technologies, Inc. (Continental) Model C-125, C145, IO-360, IO-470, IO-550, O-300, O-470, TSIO-360, and TSIO-520 series engines and certain Continental Motors IO-520 series engines with a certain oil filter adapter installed. AD 2022-04-04 required replacing the oil filter adapter fiber gasket (fiber gasket) with an oil filter adapter copper gasket (copper gasket). This AD was prompted by reports of two accidents that were the result of power loss due to oil starvation. This AD requires replacing the fiber gasket with a copper gasket or a stainless steel embedded within polytetrafluoroethylene gasket (stainless steel PTFE gasket). This AD also revises the applicability to include Continental model engines equipped with an F&M Enterprises, Inc. (F&M) or a Stratus Tool Technologies, LLC (Stratus) oil filter adapter installed. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1159; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For service information identified in this final rule, contact Stratus Tool Technologies, LLC, 2208 Air Park Drive, Burlington, NC 27215; phone: (800) 822-3200; website: tempestplus.com.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1159.

FOR FURTHER INFORMATION CONTACT: George Hanlin, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5584; email: 9-ASO-ATLACO-ADs@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to supersede AD 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022) (AD 2022-04-04). AD 2022-04-04 applied to certain Continental Model C-125, C145, IO-360, IO-470, IO-520, IO-550, O-300, O-470, TSIO-360, TSIO-520 series engines with a certain oil filter adapter installed. The SNPRM published in the *Federal Register* on June 2, 2023 (88 FR 36258). The SNPRM was prompted by a comment from an individual commenter noting that certain engine models were missing from the applicability in the notice of proposed rulemaking (NPRM). The commenter also specified that the referenced service information in the NPRM has been revised by the manufacturer. In response to this comment, the FAA determined that

additional model engines are affected by the unsafe condition and, as a result, should be added to the applicability paragraph of this AD. The FAA also discovered that certain model engines, with permold type crankcases, were inadvertently included in the applicability paragraph of the NPRM, which the FAA removed in the SNPRM. In the SNPRM, the FAA proposed to require replacing the fiber gasket with a copper or stainless steel PTFE gasket. The FAA also proposed to revise the applicability to include Continental model engines equipped with an F&M or a Stratus oil filter adapter installed per Supplemental Type Certificate SE8409SW, SE09356SC, or SE10348SC. In addition, the FAA also proposed to include the revised service information. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the SNPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adoption of the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the SNPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Stratus Mandatory Service Bulletin SB-001 Rev C, dated June 16, 2022, which specifies procedures for removing a fiber gasket and replacing it with a copper gasket, P/N AN900-28 or P/N AN900-29, or a stainless steel PTFE gasket, P/N ST07, as an improved alternative to the copper gasket.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 6,300 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Replace fiber gasket with copper gasket or stainless steel PTFE gasket	2.5 work-hours x \$85 per hour = \$212.50	\$34	\$246.50	\$1,552,950

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive AD 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022); and

b. Adding the following new airworthiness directive:

2023-17-04 Continental Aerospace Technologies, Inc.: Amendment 39-22530; Docket No. FAA-2022-1159; Project Identifier AD-2022-00692-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022) (AD 2022-04-04).

(c) Applicability

This AD applies to Continental Aerospace Technologies, Inc. (Continental) model engines equipped with an F&M Enterprises, Inc. (F&M) or a Stratus Tool Technologies, LLC (Stratus) oil filter adapter installed per Supplemental Type Certificate SE8409SW, SE09356SC, or SE10348SC.

Note 1 to paragraph (c): These F&M and Stratus oil filter adapters are known to be installed on Continental Model C-125, C-145, GO-300, IO-360, IO-470, IO-520, IO-550, O-300, O-470, TSIO-360, and TSIO-520 series engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 8550, Reciprocating Engine Oil System.

(e) Unsafe Condition

This AD was prompted by reports of two accidents that were the result of power loss due to oil starvation. The FAA is issuing this AD to prevent loss of engine power. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Before accumulating 50 flight hours after the effective date of this AD or at the next scheduled oil change after the effective date of this AD, whichever occurs first, remove any F&M or Stratus oil filter adapter fiber gasket from service and replace it with an oil filter adapter copper gasket, part number (P/N) AN900-28 or P/N AN900-29, or a stainless steel polytetrafluoroethylene gasket, P/N ST07, as applicable, in accordance with the Compliance Instructions, paragraph 6., pages 6 through 10 (including all detailed instructions for Figure 5 through Figure 16), of Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev C, dated June 16, 2022.

(h) Installation Prohibition

After the effective date of this AD, do not install an F&M or a Stratus oil filter adapter fiber gasket on any affected engine.

(i) Credit for Previous Actions

You may take credit for the actions required by paragraph (g) of this AD if you performed those actions before the effective date of this AD using Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev B, dated June 17, 2021, which

was previously approved for IBR on March 29, 2022 (87 FR 9435, February 22, 2022), but is not incorporated by reference in this AD.

(j) Special Flight Permit

A special flight permit may be issued in accordance with 14 CFR 21.197 and 21.199 to permit a one-time non-revenue ferry flight to operate the airplane to the nearest location where the maintenance action can be performed provided that the engine oil pressure and engine oil temperatures are in their allowable ranges and there is no noticeable increase in engine noise. This flight must be performed with no passengers on board.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, East Certification Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification branch, send it to the attention of the person identified in paragraph (l) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) AMOCs approved for AD 2022-04-04 are approved as AMOCs for the corresponding provisions of this AD.

(l) Additional Information

For more information about this AD, contact George Hanlin, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5584; email: 9-ASO-ATLACO-ADs@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev C, dated June 16, 2022.

(ii) [Reserved]

(3) For service information identified in this AD, contact Stratus Tool Technologies, LLC, 2208 Air Park Drive, Burlington, NC 27215; phone: (800) 822-3200; website: tempestplus.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 15, 2023.

Victor Wicklund, Deputy Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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